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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,419	10/23/2003	J. Rodney Walton	020554	2594
23596 7590 08/05/2008 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER				
SMITH, MARCUS				
ART UNIT		PAPER NUMBER		
2619				
NOTIFICATION DATE		DELIVERY MODE		
08/05/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/693,419

**Applicant(s)**

WALTON ET AL.

**Examiner**

MARCUS R. SMITH

**Art Unit**

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 103-125 and 217-221 is/are pending in the application.  
4a) Of the above claim(s) 126-143 and 222-224 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 103-125 and 217-221 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The office action mailed on 7/14/08 is replaced with this office action.

#### ***Election/Restrictions***

1. The requirement is still deemed proper and is therefore made FINAL.
2. This application contains claims 126-143 and 222-224 drawn to an invention nonelected with traverse in the reply filed on 4/25/08. The remaining claims are not readable on the elected invention because the group 7 and group 8 can not be combined together. These groups will be classified in the same area, but each group claim different and distinct claim from each other. Each group has a forward control channel, but group 7 uses the forward control channel for scheduling, while group 8 uses forward control channel for transmitting information a two different rates.

A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 122-125 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 122 recites the limitation "channel structure" in line 1. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 123 recites the limitation "channel structure" in line 1. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 124 recites the limitation "channel structure" in line 1. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 125 recites the limitation "channel structure" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 101***

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 103-115 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A channel structure is not a method, apparatus, or system. A channel structure falls under signal per se, which is non-statutory subject matter.

The applicant needs to review the Interim Guidelines for 35 USC 101:

[http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101\\_20051026.pdf](http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf)

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 103-104, 106-108, 116-125 and 217-221 are rejected under 35

U.S.C. 102(e) as being anticipated by Li et al. (US 2002/0163879).

with regard to claims 103 and 121, Li et al. teaches:

A channel structure for a wireless multiple-access multiple-input multiple-output (MIMO) communication system, comprising:

a broadcast channel (pilot symbols) for transmitting, on a downlink, system parameters and a pilot used for channel estimation of the downlink (page 2 paragraph 28);

a forward control channel for transmitting, on the downlink, a schedule for data transmission on the downlink and an uplink (page 6, paragraph 79 and page 3, paragraph 33: The examiner views the downlink control channel for the notifying the subscribers of the cluster schedule.);

a forward channel for transmitting traffic data on the downlink (dedicated downlink traffic channel: page 3, paragraph 33);

a random access channel for transmitting, on the uplink, user requests (feedback information) to access the system (uplink access channel: page 2, paragraph 29 and page 3, paragraph 32 describes the feedback information. The examiner views traffic request as user requests.); and

a reverse channel for transmitting traffic data on the uplink (dedicated traffic channel: page 3, paragraph 34).

with regard to claims 116, and 217, Li et al. teaches:

An apparatus in a wireless multiple-access multiple-input multiple-output (MIMO) communication system, comprising:

a transmit data processor operative to  
process system parameters and a pilot for transmission via a broadcast channel,  
wherein the pilot is used for channel estimation of the downlink (page 2 paragraph 28),  
process scheduling information for transmission via a forward control channel,  
wherein the scheduling information is for data transmission on the downlink and an  
uplink (page 6, paragraph 79 and page 3, paragraph 33: The examiner views the  
downlink control channel for the notifying the subscribers of the cluster schedule.), and  
process traffic data for transmission via a forward channel (dedicated downlink  
traffic channel: page 3, paragraph 33); and  
a receive data processor operative to  
process user requests received via a random access channel (uplink access  
channel: page 2, paragraph 29 and page 3, paragraph 32 describes the feedback  
information. The examiner views traffic request as user requests.), and  
process traffic data received via a reverse channel (dedicated traffic channel:  
page 3, paragraph 34).

with regard to claims 104, 117, 122, and 218, teaches:

The apparatus of claim 116, wherein the broadcast channel, forward control  
channel, forward channel, random access channel, and reverse channel are time  
division multiplexed within a frame having a predetermined time duration (page 4,

paragraph 51, The examiner views the all the channels are in either pilot symbol period or data traffic periods. Thus the pilot period and traffic period can be viewed as a one frame).

with regard to claims 106, 118, 123, and 219 teaches:

The apparatus of claim 116, wherein the broadcast channel and the forward control channel are transmitted using a diversity mode supporting data transmission with redundancy from a plurality of transmit antennas (page 2, paragraph 19).

with regard to claims 107, 119, 124, and 220 teaches:

The apparatus of claim 116, wherein the forward channel and the reverse channel support a diversity mode and a spatial multiplexing mode, the diversity mode supporting data transmission with redundancy from a plurality of transmit antennas, and the spatial multiplexing mode supporting data transmission on a plurality of spatial channels (page 2, paragraph 19).

with regard to claims 108, 120, 125, and 221, Li et al. teaches:

The apparatus of claim 116, wherein the random access channel supports a single-input multiple-output (SIMO) mode and a beam-steering mode, the SIMO mode supporting data transmission from a single transmit antenna to multiple receive antennas, and the beam-steering mode supporting data transmission on a single spatial channel associated with a highest rate among a plurality of spatial channels (page 6, paragraph 75).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS R. SMITH whose telephone number is

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(571)270-1096. The examiner can normally be reached on Mon-Thurs: 7:30 am - 5:00 p.m. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRS 7/03/08

/CHAU T. NGUYEN/

Supervisory Patent Examiner, Art Unit 2619